

WHAT IS CLAIMED IS:

1. An immunogenic polypeptide, comprising a self IgE portion and a non-self IgE portion, wherein said immunogenic polypeptide is effective to induce an anti-self IgE response in a mammal.
2. The immunogenic polypeptide of claim 1, wherein said mammal is a human.
3. The immunogenic polypeptide of claim 1, wherein said self portion comprises at least a portion of a CH3 domain of IgE.
4. The immunogenic polypeptide of claim 1, wherein said polypeptide is capable of dimerizing to form a soluble immunogenic dimer effective to induce said anti-self IgE response in said mammal.
5. The immunogenic polypeptide of claim 1, wherein said non-self IgE portion comprises a first region and a second region, said self IgE portion being located between said first and second regions of said non-self IgE portion.
6. The immunogenic polypeptide of claim 5, wherein said first region comprises at least a portion of an IgE CH2 domain.
7. The immunogenic polypeptide of claim 5, wherein said second region comprises at least a portion of an IgE CH4 domain.
8. The immunogenic polypeptide of claim 1, wherein said non-self IgE portion comprises an IgE sequence present in a non-placental mammal.
9. The immunogenic polypeptide of claim 8, wherein said non-placental mammal is selected from the group consisting of opossum, platypus, koala, kangaroo, wallaby, and wombat.

10. The immunogenic polypeptide of claim 1, wherein said self IgE portion lacks the CH2 domain of an IgE antibody.

11. The immunogenic polypeptide of claim 1, wherein said anti-self IgE response is a polyclonal response.

12. A vaccine complex for vaccinating a mammal, said complex comprising a first and second polypeptide, wherein each of said first and second polypeptides contains at least two similar amino acid sequences at least five amino acid residues in length, wherein said first and second polypeptides are connected to form said complex, and wherein administration of said complex to said mammal induces an immune response against at least a portion of said first or second polypeptide.

13. The complex of claim 12, wherein said first or second polypeptide comprises an amino acid sequence expressed by said mammal.

14. The complex of claim 12, wherein said first and second polypeptides are identical.

15. The complex of claim 12, wherein the connection of said first and second polypeptides comprises a disulfide bond.

16. The complex of claim 12, wherein the connection of said first and second polypeptides comprises a non-covalent interaction.

17. The complex of claim 12, wherein said first or second polypeptide comprises a linker site.

18. The complex of claim 12, wherein said complex comprises a linking molecule.

19. The complex of claim 18, wherein said linking molecule connects said first and second

polypeptide.

20. The complex of claim 12, wherein said complex comprises a third polypeptide, said third polypeptide having a cytokine activity.

21. The complex of claim 20, wherein said cytokine activity is an activity of a cytokine selected from the group consisting of interferon- α , interferon- β , interferon- γ , TNF- α , IL-1, IL-2, IL-4, IL-6, IL-12, IL-15, IL-18, and granulocyte-macrophage colony stimulating factor.

22. A vaccine complex for vaccinating a mammal, said complex comprising a first polypeptide connected to a second polypeptide, wherein said first polypeptide contains at least two similar amino acid sequences at least five amino acids in length, wherein said second polypeptide has a cytokine activity, and wherein administration of said complex to said mammal induces an immune response against at least a portion of said first polypeptide.

23. A vaccine complex for vaccinating a mammal, said complex comprising a first, second, and third polypeptide, wherein said first, second, and third polypeptides are connected to form said complex, wherein said first polypeptide has a first cytokine activity, wherein said second polypeptide has a second cytokine activity, and wherein administration of said complex to said mammal induces an immune response against at least a portion of said third polypeptide.

24. A vaccine complex for vaccinating a mammal, said complex comprising a first polypeptide connected to a second polypeptide, wherein said first polypeptide is a polypeptide having interferon- α or interferon- β activity, and wherein administration of said complex to said mammal induces an immune response against at least a portion of said second polypeptide.

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